



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/663,190

09/15/2003

Kenichi Ohkubo

56232.95

1414

7590

12/14/2006

Cameron K. Kerrigan
Squire, Sanders & Dempsey L.L.P.
Suite 300
1 Maritime Plaza
San Francisco, CA 94111

EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,190

Applicant(s)

OHKUBO ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14 and 16-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-25,27 and 29 is/are allowed.
- 6) ☒ Claim(s) 1,12,16 and 28 is/are rejected.
- 7) ☒ Claim(s) 3-11,14,26,30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 10/5/06.

In light of the new grounds of rejection set forth below, the following action is non-final.

Claim Objections

2. Claim 11 is objected to because of the following informalities:

In order that the claim have proper antecedent basis, it is suggested that in claim 11, line 2, after "constitutes" and before "colored", "the" is inserted.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16, which depends on claim 29, recites "wherein the colorant is an oil-soluble dye" while claim 29, lines 2-3 recite the use of "a colorant" and "a dye". The scope of the claim is confusing given that it is not clear if the oil-soluble dye of claim 16 is the same as the dye of claim 29. Should claim 16 be amended to recite "wherein the dye is an oil-soluble dye"?

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 1714

6. Claims 1 and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, and 7 of copending Application No. 10/418,779. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/418,779 discloses ink comprising colored particles having dye, core resin, and shell resin covering the dye and the core resin wherein the colored particles are dispersed in an aqueous medium and wherein the particle diameter of a particle at the peak of the particle diameter distribution curve is not more than 50 nm or 5-50 nm.

The difference between copending 10/418,779 and the present claimed invention is the requirement in the claims of reactive emulsifier, specific type of dye, and process for producing the colored particles.

It is noted that copending 10/418,779 is silent with respect to the use of reactive emulsifier.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 29, lines 13-17 of copending 10/418,779 that discloses the use of reactive emulsifier when producing the colored particles in order to form stronger and more stable shell.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use reactive emulsifier in the colored particles of copending 10/418,779 in order to form a stronger and more stable particle.

It is further noted that copending 10/418,779 broadly discloses the use of dye but does not disclose specific type of dye utilized.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 38, lines 1-14 of copending 10/418,779 that discloses that the dye utilized is in fact an oil-soluble dye.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use oil-soluble dye as the dye in copending 10/418,779 in order to produce ink with desired color properties.

Copending 10/418,779 is silent with respect to the process used to form the colored particles. However, even though there is no disclosure in copending 10/418,779 of process for producing colored particles as presently claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for forming the colored particles and given that copending 10/418,779 disclose ink comprising colored particles as presently claimed, it is clear that copending 10/418,779 meets the requirements of present claims 1 and 12, and thus one of ordinary skill in the art would have arrived at the present invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claim 28 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, and 7 of copending Application No.

10/418,779. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/418,779 discloses ink comprising colored particles having dye, core resin, and shell resin covering the dye and the core resin wherein the colored particles are dispersed in an aqueous medium and wherein the particle diameter of a particle at the peak of the particle diameter distribution curve is not more than 50 nm or 5-50 nm.

It is noted that the present claim is drawn to dispersion of colored particles while copending claims are drawn to ink. However, it is significant to note that the ink of the copending claims comprises dispersion of colored particles as presently claimed and thus meets the requirements of the present claim with respect to the dispersion of colored particles.

Thus, the difference between copending 10/418,779 and the present claimed invention is the requirement in the claims of reactive emulsifier and process for producing the colored particles.

It is noted that copending 10/418,779 is silent with respect to the use of reactive emulsifier.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 29, lines 13-17 of copending 10/418,779 that discloses the use of reactive emulsifier when producing the colored particles in order to form stronger and more stable shell.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use reactive emulsifier in the colored particles of copending 10/418,779 in order to form a stronger and more stable particle.

Copending 10/418,779 is silent with respect to the process used to form the colored particles. However, even though there is no disclosure in copending 10/418,779 of process for producing colored particles as presently claimed, it is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) . Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983).

Therefore, absent evidence of criticality regarding the presently claimed process for forming the colored particles and given that copending 10/418,779 disclose dispersion of colored particles as presently claimed, it is clear that copending 10/418,779 meets the requirements of present claim 28, and thus one of ordinary skill in the art would have arrived at the present invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

8. Claims 1 and 12 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 11, and 14 of copending Application No. 10/418,779. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/418,779 discloses ink comprising colored particles having dye, core resin, and shell resin covering the dye and the core resin wherein the colored particles are dispersed in an aqueous medium. It is disclosed that the colored articles are prepared by forming colored particle dispersion comprising colored particles containing the dye and the core resin and shelling the colored particles with shell resin by adding a monomer having a polymerizable double bond to the colored particles and emulsion polymerizing.

The difference between copending 10/418,779 and the present claimed invention is the requirement in the claims of (a) reactive emulsifier, (b) specific type of dye, and (c) peak particle diameter.

With respect to difference (a), is noted that copending 10/418,779 is silent with respect to the use of reactive emulsifier.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when

addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438,164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 29, lines 13-17 of copending 10/418,779 that discloses the use of reactive emulsifier when producing the colored particles in order to form stronger and more stable shell.

With respect to difference (b), it is noted that that copending 10/418,779 broadly discloses the use of dye but does not disclose specific type of dye utilized.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re Boylan*, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438,164 USPQ 619,622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 38, lines 1-14 of copending 10/418,779 that discloses that the dye utilized is in fact an oil-soluble dye.

With respect to difference (c), copending 10/418,779 is silent with respect to the peak particle diameter.

Applicants' attention is drawn to MPEP 804 where it is disclosed that "the specification can always be used as a dictionary to learn the meaning of a term in a patent claim." *In re*

Boylan, 392 F.2d 1017, 157 USPQ 370 (CCPA 1968). Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Consistent with the above underlined portion of the MPEP citation, attention is drawn to page 34, lines 1-0-17 and page 35, lines 7-18 of copending 10/418,779 that discloses that the colored particles possess peak particle diameter of not more than 50 nm in order to provide ink with excellent glossiness and color reproducibility.

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use reactive emulsifier and oil-soluble in the colored particles of copending 10/418,779 and to utilize colored particles with peak particle diameter of at most 50 nm in order to form a stronger and more stable colored particle and to produce ink with desired color that has excellent glossiness and color reproducibility, and thereby arrive at the present invention for the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. Claims 1 and 12 or claim 28 are directed to an invention not patentably distinct from claims 1, 6, and 7 or claims 1, 11, and 14 of commonly assigned 10/418,779. Specifically, although the conflicting claims are not identical, they are not patentably distinct from each other because of the explanations given in paragraphs 6, 7, or 8 above.

10. The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300).

Commonly assigned 10/418,779, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Allowable Subject Matter

11. Claims 17-25, 27, and 29 allowable over the "closest" prior art Vincent et al. (U.S. 6,841,591) and Ninomiya et al. (U.S. 2003/0055115) for the following reasons.

Vincent et al. disclose dispersion of colored particles prepared by dissolving polymer and dye in organic solvent, emulsifying the polymer and dye using a surfactant or emulsifier and subsequently copolymerizing the mixture with polymerizable monomer.

Ninomiya et al. disclose dispersion of colored particles prepared by dissolving polymer and dye in organic solvent, adding emulsifier, and subsequently copolymerizing the emulsified mixture with polymerizable monomer. The ratio of colorant to polymer is 1:1.

However, there is no disclosure in either Vincent et al. or Ninomiya et al. of reactive emulsifier as required in present claim 29. Further, there is no disclosure or suggestion in either Vincent et al. or Ninomiya et al. that the peak particle diameter, which is defined as a diameter corresponding to the peak of the volume average particle diameter distribution curve (see page 42 of the present specification), is at most 50 nm as now required in present claim 29.

12. Claims 3-11, 14, 26, 30, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3-11, 14, 26, 30, and 31 would be allowable if rewritten independent form as described above for the following reasons.

Vincent et al. (U.S. 6,841,591) disclose dispersion of colored particles prepared by dissolving polymer and dye in organic solvent, emulsifying the polymer and dye using a surfactant or emulsifier and subsequently copolymerizing the mixture with polymerizable monomer. It is further disclosed that the resulting colored particles have diameter of 50-200 nm and maximum diameter approximating micrometer dimension.

Ninomiya et al. (U.S. 2003/0055115) disclose dispersion of colored particles prepared by dissolving polymer and dye in organic solvent, adding emulsifier, and subsequently copolymerizing the emulsified mixture with polymerizable monomer. It is disclosed that the

particle diameter of the colored particles is not more than 200 nm and that the volume average particle diameter is 10-100 nm.

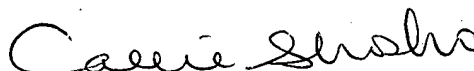
However, there is no disclosure or suggestion in either Vincent et al. or Ninomiya et al. that the peak particle diameter, which is defined as a diameter corresponding to the peak of the volume average particle diameter distribution curve (see page 42 of the present specification), is at most 50 nm as required in present claim 1.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
12/10/11